

EPI-3601S

Wireless LAN PCI Adapter (802.11g & 802.11b up to 108 Mbps)



User Manual Version: 1.2

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1 Introduction

EnGenius EPI-3601S Wireless LAN PCI Adapter compliant with IEEE802.11g, adopts "Super G" and "Extended Range" WLAN transmission technologies, resulting in transmission speeds of up to 108M, transmission distance is 2-3 times that of the normal 11b, 11g products, transmission range extended to 4-9 times. It provides multiple security options with 64/128/152-bit WEP Encryption, WPA, IEEE802.1X, TKIP and AES, which provides super-safe data communication abilities.

With strong firewall, EPI-3601S features effective security to protect wireless network from intruders. With external antenna, it can fit various operation environments and let the user connect to the Wireless network effortlessly. EPI-3601S also supports Seamless Roaming compatible with other 11b, 11g WLAN equipments.

2 Features

Features	Benefits
2.4GHz IEEE802.11b/g standard	Fully interoperable with IEEE802.11/b/g
	compliant products.
High Speed Data Rate up to 108Mbps*	Capable of handling heavy data payloads
	such as MPEG video streaming
802.11i security specifications, provides	Enhances authentication and security
Advanced Encryption Standard (AES),	
Temporal Key Integrity Protocol (TKIP),	
IEEE802.1x client	
Site Survey Utility	Allows users to browser the available active
	access points which users can connect
802.11e Standard Support	Wireless Multimedia Enhancements Quality of
	Service support (QoS)
Seamless roaming	Full mobility
Supports eXtended Range technology	Up to 9 times than the range of normal
	wireless products.

* Theoretical wireless signal rate based on IEEE standard of 802.11a, b, g chipset used. Actual throughput may vary. Network conditions and environmental factors lower actual throughput rate.

3 Package Contents

Open the package carefully, and make sure that none of the items listed below are missing. Do not discard the packing materials, in case of return; the unit must be shipped back in its original package.

- > One EPI-3601S Wireless LAN PCI card
- > One Screwable Antenna
- > One CD-ROM with User's Manual, Configuration utility & Drivers



Green color LED	Description
LINK	Blinks when active connection is available else remains switched OFF

4 System Requirements

To begin using the WLAN PCI Adapter, your PC/Notebook must meet the following minimum requirements:

- > Operating System Microsoft Windows XP/2000
- > PCI socket x 1 (free to use socket)
- > 256MB RAM memory or higher
- > 750MHz CPU or higher configuration

5 Installation

Important: Install the WLAN Adapter utilities before inserting the WLAN Adapter into your computer.

Insert the support CD into your optical drive. In the CD drive folder, you will see the following file.

Click open the file and you can briefly see the following...





Click next to install or click cancel to terminate installation.

InstallShield Wizard		×
EnGenius		
	Cick: the type of unity you prefer.	Description Occuse this cation to install the driver and clear utilities. This is the recommended option.

InstallShield Wizard		×
EnGenius		
	Click the type of setup you prefer. Includ Clour Ublies and Oniver Includ Clour Ublies Includ Cloure Ublie Con Includ Cloure Ublie Includ Cloure U	ription ore the cyclion to install the cyclion analogy the valides.
translitiveld	CLark Leats	Cancel

Two options are available for installation. Choose one of them and click Next

- 1. EnGenius Configuration Utility + driver.
- 2. Driver only.



Choose location to install and click Next.



Choose name for program folder to create shortcuts. Click Next.

EnGenius Client Installation Program	×
EnGenius Client Installation Program	
IMPORTANT: Please Read!	_
On Windows XP, you can configure your EnGenius Wireless LAN Client Adapter through the EnGenius Client Utility (ECU) or a third-party supplicant. Because third-party tools may not	
provide all of the functionality available in the ECU, EnGenius recommends that you use the ECU. (Please note that a patch from Microsoft might be required to use the Microsoft tool with	
WPA security.)	
On the next screen, select whether you want to use the ECU or a third-party tool to configure your client adapter.	
NOTE: If you select a third-party tool, some of the ECU features will not be available. To	
activate those features, you must install the ECU.	
InstallShield	-
< <u>B</u> ack <u>N</u> ext> Cancel]
ECU. (Please note that a patch from Microsoft might be required to use the Microsoft tool with WPA security.) On the next screen, select whether you want to use the ECU or a third-party tool to configure your client adapter. NOTE: If you select a third-party tool, some of the ECU features will not be available. To activate those features, you must install the ECU. InstallShield	

Should you agree with terms and conditions mentioned, Click **Next** else click **Cancel** to exit.

Choose Configuration Tool	×
Which tool will you use to configure your client adapter?	_
EnGenius Client Utility and Supplicant.	
O Third-Party Supplicant	
	_
< <u>B</u> ack <u>N</u> ext > Cancel	

Choose Engenius client Utility & supplicant

Choose Configuration Tool	×
Which tool will you use to configure your client adapter?	
C EnGenius Client Utility and Supplicant.	
Third-Party Supplicant	
InstallShield	
< <u>B</u> ack <u>N</u> ext> Cancel]

Else choose Third-party supplicant & click Next.

EnGenius Client Installation Pro	gram	×
EnGenius		
	EnGenius Client Installation Program is configuring your new software installation.	
	Installing the driver files	
InstallShield		



Be patient until the installation process is complete.



EnGenius Client Installation Pr	ogram
EnGenius	
	InstallShield Wizard Complete The installation program has successfully performed the selected operations. Click Finish to exit the Wizard.
InstallShield	C gack Finish Cancel

Find the item in Start menu

			_			~	
666 B	22	Programs	, 📾	DeepBurner	۲	2	Paint.NET
	9.00	1109,000		Dia	۲	Ð	Remote Assistance
nal	3	Documents	ا 🖻	Docudesk	۲	E	TextPad
Sio'		C. 111-1-1		Download Accelerator Plus (DAP)	۲	\mathbf{P}	Windows Desktop Search
es	1	Settings	ľ 📾	EnGenius	۲	6	EnGenius Client Utility
2	\sum	Search	• 💼	FileZilla	۲	2	Uninstall EnGenius Client Utility

6 Verify installation

Verification involves finding EPI-3601S card in System Properties and checking if the driver is installed correctly.

- 1. Open [Control Panel] =>Double-click [System].
- 2. Select [Hardware] tab=>Click [Device Manager].

System Re	estore	Automat	ic Updates	Remote
General	Computer N	lame	Hardware	Advanced
Device Man	ager			1.11
	ne Device Mana <u>c</u> Nour computer	jer lists all t Ise the De	he hardware device vice Manager to cl	es installed hange the
- pri	operties of any de	evice.	nice manager to er	iongo ino
			Device M	anager
Drivers				
Dr. Dr	ium Cinning late :		والمراجع ومراجع والمراجع	10
	ive suririu lets (Jou make s	ure that installed d	ivers are
C 00	mpatible with Wi	ndows. Wi	ndows Update lets	ivers are you set up
Co ho	impatible with Wi w Windows con	ndows. Wi nects to W	ndows Update lets indows Update for	ivers are you set up drivers.
Cay co	mpatible with Wi Windows con Driver Signir	ndows. Wi nects to W	indows Update lets	ivers are you set up drivers. Jpdate
Cite Cite Cite Cite Cite Cite Cite Cite	mpatible with Wi w Windows con Driver <u>S</u> ignir	ndows. Wi nects to W	indows Update lets indows Update for <u>W</u> indows U	ivers are you set up drivers. Jpdate
Hardware Pr	mpatible with Wi w Windows con Driver <u>S</u> ignin ofiles	ndows. Wi nects to W	ure mar installed di indows Update lets indows Update for <u>W</u> indows U	rvers are you set up drivers. Jpdate
Hardware Pr	mpatible with Wii www.indows.com Driver Signin ofiles ardware profiles p	ndows. Wi nects to W	ave for you to set up	nvers are you set up drivers. Jpdate and store
Hardware Pr	ofiles ardware profiles profiles profiles ardware profiles profile	rovide a w	ay for you to set up ns.	nvers are you set up drivers. Jpdate and store
Hardware Pr	ofiles ardware profiles p ferent hardware of	rovide a w	av for you to set up	rvers are you set up drivers. Jpdate
Hardware Pr	ofiles ardware profiles pr ferent hardware of	rovide a w	and the state of t	rvers are you set up drivers. Jpdate and store Profiles

Select Network Adapters.

Click open [EnGenius PCI wireless Network Adapter]



Verify that the device status of [EnGenius PCI wireless Network Adapter] [This device is working properly]->Click [OK]

nGeniu	s PCI Wireless N	letwork Adapter Properties 👘 🛜		
General	Advanced Driver	Details Resources		
	EnGenius PCI Wir	eless Network Adapter		
	Device type:	Network adapters		
	Manufacturer:	EnGenius		
	Location:	PCI Slot 1 (PCI bus 4, device 1, function 0)		
This device is working properly. If you are having problems with this device, click Troubleshoot to start the troubleshooter.				
	usage:	Iroubleshoot		
Use th	is device (enable)	*		
		OK Cancel		

7 Setup Network Configuration (MS WinXP)

- Enter [Start Menu] =>select [Control panel] =>select [Network].
- Right-click [Wireless Network]
- Select [Local Area Connection]) icon=>select [properties]

🕹 Wireless Network Connection 9 Properties 💦 🛛 🛛				
General Wireless Networks Advanced				
Connect using:				
EnGenius PCI Wireless Network Ada;				
This connection uses the following items:				
🗹 📮 QoS Packet Scheduler 🗾 🔼				
In Microsoft TCP/IP version 6 In the second seco				
Internet Protocol (TCP/IP)				
Install Uninstall Properties				
Description				
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.				
 ✓ Show icon in notification area when connected ✓ Notify me when this connection has limited or no connectivity 				
OK Cancel				

• Select [Internet Protocol (TCP/IP)] =>Click [Properties].

eneral	Alternate Configuration	1
You ca this cap	n get IP settings assign ability. Otherwise, you r	ed automatically if your network supports need to ask your network administrator fo
the app	ropriate IP settings.	
00	btain an IP address auto	omatically) a
OU	se the following IP addr	355:b
IP ad	ddress:	the second
Subr	net mask:	· · · · ·
Defa	ult gateway:	
0	btain DNS server addre	ss automatically) a
OU	se the following DNS se	rver addresses:
Prefe	erred DNS server.	· · · · · ·
Alter	nate DNS server.	
		Advanced.

• Select the [General] tab.

a. If your Wireless Router supports [DHCP] function, please select both [Obtain an IP address automatically] and [Obtain DNS server address automatically]. b. If the router does not support [DHCP] function, you have to configure the IP and DNS settings.

8 Setup WLAN (EnGenius Client Utility)

Prerequisite:

- 1. Your home/office environment should have a wireless LAN Access Point (AP) that is available for your use.
- 2. You should readily have the (security keys) to connect those Wireless LAN Access Points (AP)

EnGenius Client utility will first automatically link with any Wireless AP if there is no security key required. If the connection is successful, a message will appear on taskbar.

Following steps guides you to initially setup a wireless network connection. If in case any non secure WLAN access point was found by EnGenius Client Utility, it will have already connected to that AP. Notice the EnGenius Client Utility on taskbar

shows connected icon.

Hovering the mouse cursor briefly over EnGenius Utility icon will show status as follows...the current status indicates that **Config utility** has automatically connected to an **Access Point** named **ICN_DLINK_WIFI**. Other details about the connection are shown.

🔇 📶 🔊 🌒 🕏 🚫 📕 7:38 PM 👘
ICN_11g
ICN_DLINK_WIFI
Associated
Excellent
54.0 Mbps, 11g
EnGenius PCI Wireless Network Adapter
192.168.200.121

Click open EnGenius Client Utility from start menu.

You will see the utility show up as follows. Current Status tab shows information about the **ACTIVE** network connection.

G EnGenius Client Utility - Cu	rent Profile: ICN_11g		?×
Action Options Help			
Current Status Profile Management	Diagnostics		
Profile Name:	ICN_11g	EnGenius	
Link Status:	Associated	Network Type: Infrastructure	
Wireless Mode:	802.11g 54 Mbps	Current Channel: 6	
Server Based Authentication:	None	Data Encryption: WEP	
IP Address:	192.168.200.121		
Signal Strength:		Excellent	
		Advanced	

In case there was not any network connection made, it can be manually connected by following the steps listed below.

- 1. Click open EnGenius Client Utility from start menu.
- 2. Click open Profile Management.

G EnGenius Client Utility - Current Profile: ICN_11g	? 🛛
Action Options Help	
Current Status Profile Management Diagnostics	
Default	<u>N</u> ew
© ICN_11g ICN_11b	Modify
	Remove
	Activate
Details	
Network Type: Infrastructure	Import
Security Mode: Disabled	Euroat
Network Name 1 (SSID1): <empty></empty>	
Network Name 2 (SSID2): <empty></empty>	S <u>c</u> an
Network Name 3 (551D3): <empty></empty>	
Auto Select Profiles	Order Profiles
Disable WLAN if LAN is Connected	

Click Scan. You will see a window showing all available AP that can be detected by EPI-3601S Wireless LAN card.

Natural Nama (CCID) : 👘 Cursor - MR - Cianal Strangth	
Image: Subject An angle	Wireless 802.11g! 802.11b 802.11g!
Activate Refresh	

Click on the SSID that you have security key information or choose an SSID which has no encryption to begin with.

Click Activate.

Then, automatically profile management window pops up as shown below.

Profile Management	? 🗙
General Security Advanced	
Profile Settings	
Profile Name: ICN_11g	
Client Name: WorkStation-S	
Network Names	í l
SSID1: ICN_DLINK_WIFI	
SSID2:	
SSID3:	
ПК	Cancel
	Cancer

Give a profile name that you can recognize later. Fill in the details of SSID,

Click Security tab in case the Access point needs security settings.

Profile Management		?×
General Security Advanced		
C Set Security Options		
O WPA/WPA2	WPA/WPA2 EAP Type: LEAP	
○ WPA/WPA2 Passphrase		
◯ 802.1x	802.1x EAP Type: LEAP	
Pre-Shared Key (Static WEP)		
◯ None		
Configure	Allow Association to Mixed Cells	
	Limit Time for Finding Domain Controller To: 0	
Group Policy Delay	: 0 🔹 sec	
	ОК Са	ancel

Click **Configure.** This Access point for instance is WEP key protected. Therefore the corresponding settings have to be keyed in.

Configure Pre-Shared	Keys (Static WEP)			? 🗙
Key Entry O Hexadecimal (0-9, A-	F) O ASCII Text (all keyboard o	haracter	s)	
Encryption Keys		WE	P Key S	ize:
Transmit K	ey	64	128	152
WEP Key 1: 💿	•••••	0	۲	0
WEP Key 2: 🔘		0	۲	0
WEP Key 3: 🔘		0	۲	0
WEP Key 4: 🔘		0	۲	0
		ĸ	C.	ancel

Type the security key information as appropriate. You will need to have this information ready in hand in case this is a protected network. Click **OK** when you are done.

Return back to **profile management** tab and click **Advanced** tab. typically you will notice the following.

	Network Type:	Infrastructure	
	802.11b Preamble:	💿 Short & Long	🔘 Long Only
Wireless Mode	Wireless Mode When Startin	g Ad Hoc Network -	
✓ 802.11g 54 Mbps			
002.110 11 Mbps	0 802.110 11 Mbps		
🗹 Super G		Channe	l: Auto 🔽
▼ eXtended Range (XR)	~ 802.11 Authentication Mode		
🗹 QoS	Auto 💿 🕻)pen 🤇) Shared

Clicking **OK** will result in connecting to the network directly.

9 System Tray Utility options

Right click on EnGenius utility icon can help do many activities.

Network connected



Network disconnected

<₽₩₩₽

Right click options (Radio Enabled)



Right click options (Radio Disabled)



1. Choose **Exit** to quit EnGenius Client utility.

2. Choose Open EnGenius Client Utility

If Radio is already disabled, you will see a window as shown below.

🔀 EnGenius Client Ut	tility - Current Profile: ICN_11b		?×
Action Options Help			
Current Status Profile M.	anagement Diagnostics		
Pi	rofile Name:	EnGenius	
	Link Status: Not Associated	Network Type:	
Wire	eless Mode:	Current Channel:	
Server Based Aut	hentication:	Data Encryption:	
	IP Address:		
Sign	al Strength:	No Link	
B∂	adio Status: Software Disabled	Advanced	

If Radio is already enabled, you will see a window as shown below.

🔓 EnGenius Client Utility - Cu	rrent Profile: ICN_11b		?×
Action Options Help			
Current Status Profile Management	Diagnostics		
Profile Name:	ICN_11b	EnGenius	
Link Status:	Associated	Network Type: Infrastructure	
Wireless Mode:	802.11b 11 Mbps	Current Channel: 6	
Server Based Authentication:	None	Data Encryption: WEP	
IP Address:	192.168.200.121		
Signal Strength:		Excellent	
		Adyanced	

3. Choose **Preferences**. Check the box to choose whether you want the utility to run when Windows starts.

EnGenius System Tray Utility Preferences	×
Startup Options I Run the program automatically when Windows starts	
Menu Options Check the items that you want to appear on the popup menu. (Unchecked items are hidden.)	•
 ✓ Help ✓ Exit ✓ Open EnGenius Client Utility ✓ Troubleshooting ✓ Disable Radio ✓ Manual Login ✓ Reauthenticate ✓ Select Profile ✓ Show Connection Status ✓ Disable WLAN if LAN is Connected 	
OK Cancel	

4. Choose **Enable Radio** and notice the message that confirms the same.



5. Choose **Disable Radio** and notice the message that confirms the same.

EnGenius Client Utility
The RF signals for the following network card(s) have been successfully enabled: EnGenius PCI Wireless Network Adapter
ОК

6. Choose Show Connection Status

If WLAN adapter is **enabled**, you will notice the following window with network connection information.

Connection Status		
Active Profile: Auto Profile Selection: Connection Status: Link Quality:	ICN_11b Disabled Associated Excellent	Total 80211
SSID: Current Receive Rate: Current Transmit Rate: Client Adapter IP Address:	ICNEXUS 11.0 Mbps 11.0 Mbps 192.168.200.121	
		ОК

If WLAN adapter is **disabled**, you will notice the following window with disabled network information.

Connection Status		
Active Profile: Auto Profile Selection: Connection Status: Link Quality:	Disabled Not Associated	Total 80211 Energy
SSID: Current Receive Rate: Current Transmit Rate: Client Adapter IP Address:		
		ОК

7. Choose Select Profile

If radio is disabled, grayed out Profile options are shown as below

Show Connection Status	
Select Profile 🔹 🕨	Default
Select Client Software	ICN_11g
Disable WLAN if LAN is Connected	✓ ICN_11b

If radio is enabled, available Profiles are shown as below

Show Connection Status		
Select Profile	►	Default
Select Client Software	۲	ICN_11g
Disable WLAN if LAN is Connected		✓ ICN_11b

8. Choose Select Client Software

If Radio is enabled, two options are shown as below.

	Show Connection Status Select Profile	•
✓ EnGenius Client Utility Windows	Select Client Software	×
	Disable WLAN if LAN is Connected	

If Radio is disabled, two options are shown as below.

	Show Connection Status	
	Select Profile	•
🖌 EnGenius Client Utility	Select Client Software	×
Windows	Disable WLAN if LAN is Connected	

9. Choose **Disable WLAN if LAN is connected.** Immediately, if an active LAN connection is detected, EPI-3601SWLAN adapter is disabled.

10. Choose Open EnGenius Client Utility

If Radio is already disabled, you will see a window as shown below.

G EnGenius Client Utility - Current Profile: ICN_111)
Action Options Help	
Current Status Profile Management Diagnostics	
Decile Marray	EnGenius
Pronie Name:	
Link Status: Not Associated	Network Type:
Wireless Mode:	Current Channel:
Server Based Authentication:	Data Encryption:
IP Address:	
Signal Strength:	No Link
Radio Status: Software Disabled	Advanced

If Radio is already enabled, you will see a window as shown below.

G EnGenius Client Utility - Cu	rrent Profile: ICN_11b	? 🗙
Action Options Help		
Current Status Profile Management	Diagnostics	
		EnGonius
Profile Name:	ICN_11b	LIIGenius
Link Status:	Associated	Network Type: Infrastructure
Wireless Mode:	802.11b 11 Mbps	Current Channel: 6
Server Based Authentication:	None	Data Encryption: WEP
IP Address:	192.168.200.121	
Signal Strength:		
		Advanced

Click **Advanced** to view more information about the current active network connection.

Advanced Status			? 🛛
Network Name (SSID): Server Based Authentication: Data Encryption: Authentication Type: Message Integrity Check: QoS:	ICN_DLINK_WIFI None WEP Open None None	Current Signal Strength: Current Noise Level: Up Time: 802.11b Preamble: Current Receive Rate: Current Transmit Rate:	-50 dBm -95 dBm 02:05:37 Short & Long 54.0 Mbps 54.0 Mbps
Associated AP Name: Associated AP IP Address: Associated AP MAC Address:	Unavailable Unavailable 00-1B-11-63-98-84	Channel: Frequency:	6 2.437 GHz OK

10 Setup Network security (WEP, WPA...)

If your AP/Router has network security key, your wireless adapter needs to have the same security setting. The details of setting up network security are described below. Please open EnGenius Client Utility.

a. None

If AP you want to connect has no encryption settings, just simply click in Set

Security Options.

WPA/WPA2	WPA/WPA2 EAP Type: LEAP
WPA/WPA2 Passphrase	
0 802.1x	802.1x EAP Type: LEAP
🔵 Pre-Shared Key (Static WEP)	
None	
Configure	Allow Association to Mixed Cells
	Limit Time for Finding Domain Controller To: 0
Group Policy Delay	y: 0 📚 sec

b. WPA/WPA2

- 1. Select WPA/WPA2 under Set Security Options.
- 2. Choose the correct **EAP type**.

Profile Management			? 🗙
General Security Advanced			
Set Security Options			
⊙ WPA/WPA2	WPA/WPA2 EAP Type:	LEAP 💌	
○ WPA/WPA2 Passphrase		EAP-TLS EAP-TTLS	
○ 802.1x	802.1x EAP Type:	PEAP (EAP-GTC) PEAP (EAP-MSCHAP V2)	
O Pre-Shared Key (Static WEP)		LEAP EAP-FAST	
◯ None			
Configure	Allow Association to Mixed Ce	ells	
	Limit Time for Finding Domain	Controller To: 0 📀 sec	
Group Policy Delay:	60 🛟 sec		
		ок са	ancel

3. Click Configure.

Profile Management			?×
General Security Advanced			
Set Security Options]	
⊙ WPA/WPA2	WPA/WPA2 EAP Type:	EAP-TTLS	
🔘 WPA/WPA2 Passphrase		EAP-TLS EAP-TTLS	
◯ 802.1×	802.1x EAP Type:	PEAP (EAP-GTC) PEAP (EAP-MSCHAP V2)	
O Pre-Shared Key (Static WEP)		LEAP EAP-FAST	
🔿 None			
Configure	Allow Association to Mixed Ce	lls	
	Limit Time for Finding Domain	Controller To: 🕕 🤤 sec	
Group Policy Delay:	60 🛟 sec		
		ОК СА	ancel

Select the check boxes for **Doman Login** and **Validate Server Identity & choose** the Trusted Root Certification Authorities.

Provide user information for EAP-TTLS authentication.

Configure EAP-TTLS	×
✓ Use Machine Information for Domain Logon	
✓ Validate Server Identity	
Trusted Root Certification Authorities	
A-Trust-nQual-03	
When connecting, use:	
⊖ Certificate	
User Name and Password	
Select a Certificate	
User Information for EAP-TTLS Authentication	
User Name: siddarth.gopal	
Password:	
Settings OK Cancel	

Click Settings.

Configure Advanced Settings	? 🔀
Server or Domain Name:	ICNTW
Login Name:	siddarth.gopal
	OK Cancel

c. WPA/WPA2 passphrase

If AP includes support for passphrase, the following settings need to be done.

In Security tab, select WPA/WPA2 passphrase. Click Configure.

et Security Options	
D WPA/WPA2	WPA/WPA2 EAP Type: EAP-TTLS
WPA/WPA2 Passphrase	
🔵 802.1×	802.1x EAP Type: LEAP
🔵 Pre-Shared Key (Static WEF	2)
🔵 None	
Configure	Allow Association to Mixed Cells
	🗌 Limit Time for Finding Domain Controller To: 🕕 🎅 sec
Group Policy Del	ay: 60 😂 sec

You can find the dialog box requests a passphrase. Key in the correct value. Click **OK**.

Configure WPA/WPA2 Passphrase	? 🛛
Enter a WPA/WPA2 passphrase (8 to 63 ASCII or 64 hexadecimal characters)	
1324123mirkwood	
ОК	Cancel

The active profile with the security settings is immediately applied.

d. Setting 802.1x

If AP you want to connect to has 802.1x based other type of authentication,

Select 802.1x. Choose the correct 802.1x EAP type.

Enable the following check boxes and set the correct value.

Allow Associa	ation to Mixed Cells		
Limit Time for	Finding Domain Controlle	ar To: 🔓 😂 sec	
General Security Advanced			<u>?</u> ×
Set Security Options			
	WPA/WPA2 EAP Type:	LEAP	
 802.1x 	802.1x EAP Type:	LEAP	
O Pre-Shared Key (Static WEP)		EAP-TLS EAP-TTLS PEAP (EAP-GTC)	
Configure	Allow Association to Mixed Ce	PEAP (EAP-MSCHAP V2) LEAP PEAP-FAST Host Based EAP	
Group Policy Delay:	Limit Time for Finding Domain	Controller To: 6 📚 sec	
		ОК	Cancel

Click Configure to setup the values of user name and password

Always Resume the Secu	re Session
Jser Name and Password S	ettings
Use Temporary User	Name and Password
Automatically Press	rompt for User Name and Password
O Manually Promp	t for User Name and Password
Use Saved User Nam	siddarth gonal
User Name:	siddarth.gopal
Deserved	
Password:	
Confirm Password:	•••••
Domain:	ICNTW
Domain.	
Include Windows Lo	icon Domain with User Name
Ne Network Connec	
	nion Uniess User is Logged in
A	uthentication Timeout Value (in seconds)

Include the correct Authentication timeout value.

Enable **No Network Connection Unless User Is Logged In** checkbox if appropriate. Else choose **User Temproary User Name and password**.

e. Pre-shared key - Static WEP

If Access Point you want to connect to has [WEP] authentication, click the **Security** tab.

Profile Management			?
General Security Advanced			
Set Security Options			
○ WPA/WPA2	WPA/WPA2 EAP Type:	LEAP	~
🔘 WPA/WPA2 Passphrase			
🚫 802.1x	802.1x EAP Type:	LEAP	~
Pre-Shared Key (Static WEP)			
🚫 None			
Configure	Allow Association to Mixed Ce	lls	
	Limit Time for Finding Domain	Controller To: 0	sec 🗧
Group Policy Delay	: 0 🜲 sec		
			OK Cancel

Choose Pre-Shared Key.

Enable checkbox related to Association to Mixed Cells.

Click **Configure**. Choose the correct **WEP Key Size**. Choose the appropriate **Key entry**. Key the values for WEP key.

Configure Pre-Shared	Keys (Static WEP)				? ×
Key Entry Hexadecimal (0-9, A-	F) () ASCII Text (all keyboar	d character	s)	
Encryption Keys			WE	P Key S	ize:
Transmit K	ey		64	128	152
WEP Key 1: 💿	•••••	••••	0	۲	0
WEP Key 2: 🔘			•	0	0
WEP Key 3: 🔘			•	0	0
WEP Key 4: 🔘			•	0	0
			OK	Ca	ancel

11 Managing Profiles

Click **Profile Management** tab. Two boxes list the existing profiles and details about the particular profile.

EnGenius Client Utility - ion Options <u>H</u> elp	Current Profile: ICN_11g	?
urrent Status Profile Managem	ent Diagnostics	
Default		<u>N</u> ew
' [CN_11g [CN_11b		Modify
		Remo <u>v</u> e
		Ac <u>t</u> ivate
⊂ Details		
Network Type:	Infrastructure	Import
Security Mode:	Pre Shared Key	
Network Name 1 (SSID1):	ICNEXUS	<u>E</u> xport
Network Name 2 (SSID2):	<empty></empty>	Com
Network Name 3 (SSID3):	<empty></empty>	<u>Jean</u>
Auto Select Profiles		Order Profiles
Disable WLAN if LAN is Con	nected	

Choose a **profile**. There are several actions to be done on a profile.

You can remove it by clicking on **remove** button. Those profile settings are no longer available again. That needs to recreate the profile if required.

You can apply the profile by clicking on Activate button.

You can modify a profile configuration by clicking on **modify** button.

Adding a new profile is quick by pressing **new** button & including the security details discussed in the previous chapter. Each profile is associated with a SSID of an Access Point therefore all details should be available to create a new profile.

Importing a profile from a previously saved configuration can be done as shown below.

Import Profi	le 🔹 🤶 🔀
Look jn: ն	EnGenius 💽 🗿 🍺 📴 🖽 -
CN_11b	
(<u>-</u> a	
File <u>n</u> ame:	ICN_11b Open
Files of <u>t</u> ype:	Config files (*.prf)

Click on the profile you want to import and choose OPEN.

Exporting a profile is similar to importing as shown below. Give an appropriate name and save the currently active configuration.

Export Profi	le			? 🗙
Savejn: 🗀	EnGenius	v G	1	•
Q ICN_11b Q ICN_11g				
Ela nama				
Flie <u>n</u> ame:				<u>S</u> ave
Save as <u>t</u> ype:	Config files (*.prf)	`		Cancel

Auto ordering Profiles

Several profiles can be arranged in a priority or preference based order by clicking the **Order Profiles** tab.

Priority of preference can be changed by using **Move up** & **Move Down** buttons.

Auto Profile Selection Management	? 🛛
Available Profiles:	
	Add
⊂ Auto Selected Profiles:	
ICN_11g	Move up
	Move down
	Remove
	OK Cancel

Power saving by disabling WLAN when LAN is Active

Enable the checkbox for **Disable WLAN if LAN is connected** and the changes are instantly applied based on whether a LAN connection is active or not.

G EnGenius Client Utility - Current Profile: ICN_11g	? 🛛
Action Options Help	
Current Status Profile Management Diagnostics	
Default	<u>N</u> ew
ICN_116	Modify
	Remo <u>v</u> e
	Activate
Details	
Network Type:	Import
Security Mode:	
Network Name 1 (SSID1):	Export
Network Name 2 (SSID2):	Scan
Network Name 3 (SSID3):	
Auto Select Profiles	Order <u>P</u> rofiles
V Disable WLAN if LAN is Connected	

12 Diagnostics

A wide range of diagnostics is available in EnGenius Client Utility.

Click **Diagnostics** tab to view the Transmit and Receive information in terms of packet numbers sent /received.

G EnGenius Client Utilit	y - Current Profile: ICN_11g	? 🛛
Action Options Help		
Current Status Profile Manag	gement Diagnostics	
- Transmit	21	Adapter Information
Broadcast Packets:	5245	Advanced Statistics
Unicast Packets:	5415	
Total Bytes:	433942	
Receive		
Multicast Packets:	24	
Broadcast Packets:	1999	
Unicast Packets:	8	
Total Bytes:	269088	

Click Adapter Information to get information about the H/W and driver information.

Adapter Informa	ition 🔹 💽 🔀
Card Name:	EnGenius PCI Wireless Network Adapter
MAC Address:	00-02-6F-BE-F2-89
Driver:	C:\WINDOWS\system32\DRIVERS\ar5211.sys
Driver Version:	5.3.0.67
Driver Date:	7/26/2007 1:19:22 PM
Client Name:	WorkStation-S

Click on **Advanced Statistics** to get information about very detailed TX/RX information.

Advanced Statistics			? 🛛
- Transmit			
France Transmitted OK:	10010	DICE	40
Frames Transmitted UK:	10816	HIS Frames:	48
Frames Retried:	006	UIS Frames:	39
Frames Dropped:	U	NOUIS Frames:	9
No ACK Frames:	1034	Retried RTS Frames:	9
ACK Frames:	10816	Retried Data Frames:	556
Receive			
Beacons Received:	46625	Authentication Time-Out:	0
Frames Received OK:	2596	Authentication Rejects:	0
Frames Received with Errors:	109839	Association Time-Out:	0
CRC Errors:	48623	Association Rejects:	0
Encryption Errors:	0	Standard MIC OK:	0
Duplicate Frames:	0	Standard MIC Errors:	0
AP Mismatches:	0	CKIP MIC OK:	0
Data Rate Mismatches:	0	CKIP MIC Errors:	0
			ОК

13 Menu

The main EnGenius Utility window has 3 menu options to choose from.

Action

Enable/Disable Radio. This is a toggle feature and appropriate response is shown in dialog boxes below





Enable/Disable Tray icon

This option enables or disables system tray icon that represents signal strength and provides other configuration options.

Options

Display Settings can be changed from % to db and refresh interval can be changed Along with relative or cumulative change in data display.

Display Settings		? 🛛
Signal Strength Display Units:	0%	⊖ dB
Refresh Interval (seconds):		1 🗘
Data Display:	 Relative 	O Cumulative
	ОК	Cancel

Scan List Settings – the items shown during AP scan can be customized using the following options

Configure Scan List Columns		? 🛛
Available Columns:	Selected Columns: Super XR Signal Strength Channel Wireless Mode	↓ ↑
	ОК	Cancel

Select Client Software – choose the utility to control the EPI-3601S Wireless LAN PCI adapter.

WZC and EnGenius and third-party tools are the options available.

Select the software application to control your wireless device Windows • EnGenius Client Utility
 Windows EnGenius Client Utility
● EnGenius Client Utility
O Third-Party Tool
OK Cancel

Help

About

Abo	ut	×
	EnGenius Client Utility	ОК
	Configuration Utility: 5.2.0.159	
	Application Interface: 5.2.0.159	
	Authentication Interface: 1.634.9.11	
	Authentication Protocol Driver: 1.0.0.68	
	Wireless Device Driver: 5.3.0.67	
	Copyright © 2001-2006 EnGenius Technologies.	

14 Uninstalling EnGenius Utility/Driver

Select Uninstall option from the start menu.

	`		7
🖬 EnGenius		≁	🎨 EnGenius Client Utility
🛅 FileZilla		•	🔄 Uninstall EnGenius Client Utility

You can see the wizard preparing for uninstallation

Version 1.2



Select Uninstall the previous installation. Click Next.



Select OK.



Select OK. Rebooting ensures clean uninstall.



Click Yes. If you want to keep it so that you can use it later, select no.

EnGenius Client Installation Program	
?	Do you really wish to remove the device driver? This removes your profiles.
	Yes No

Choose to keep or remove the device driver files.

EnGenius Client Installation Program	
⚠	The Installation Program has successfully performed the selected operations, but the system needs to be rebooted before all of the changes will take effect. Click OK to reboot the system.
	ок

Choosing **OK** will reboot PC.

Appendix A – Specifications

Data Rates

802.11g: 6, 9, 12, 18, 24, 36, 48, 54, 72 and 108Mbps

802.11b: 1, 2, 5.5, 11Mbps

Standards / Compliance IEEE802.11, IEEE802.11g, IEEE802.11b

Regulation Certifications

FCC Part 15.247, ETSI 300/328/CE

Drivers

Windows 2000/XP/Vista

Current consumption

Tx Current \leq 685mA (Full transmit) Rx Current \leq 515mA (Full transmit)

Range Coverage

Indoor: 600 meters (depends on environment) Outdoor: 1500 meters (depends on environment)

RF Information Frequency Band

2.412~2.472GHz

Media Access Protocol

Carrier Sense Multiple Access with Collision Avoidance (CSMA/CA)

Modulation Technology

802.11g: OFDM (64-QAM, 16-QAM, QPSK, BPSK) 802.11b: DSSS (DBPSK, DQPSK, CCK) Operating Channels 11 for North America, 13 for Europe

Roaming Full mobility and seamless roaming from cell to

Available transmit power Receive Sensitivity (Typical)

cell

802.11g: -90 dBm @ 6Mbps, -74 dBm @ 54Mbp 802.11b: -95 dBm @ 1Mbps -90 dBm @ 11Mbps

Available transmit power (Typical)

2.412~2.472 GHz (IEEE802.11g)
 26 @6~24Mbps

- 24 @ 36Mbps
- 23 @ 48Mbps
- 22 @ 54Mbps
- 2.412~2.462 GHz (IEEE802.11b)
 27 dBm @1~11Mbps

Networking

Topology

Ad-Hoc, Infrastructure

Security

IEEE802.1x 64/128/152-bit WEP encryption WPA-PSK/WPA2 TKIP/AES

Physical

Form Factor

32-bit PCI interface

Dimensions (LxWxH)

5.2 × 4.8 × 0.9in.(133 × 121 × 22mm)

Environmental Temperature Range

Operating Temperature: $0^{\circ}C \sim 40^{\circ}C$ ($32^{\circ}F \sim 104^{\circ}F$) Storage Temperature: $-40 \sim 70^{\circ}C$ ($-40^{\circ}F \sim 158^{\circ}F$)

Humidity (non-condensing)

Operating Humidity: 10%~90% non-condensing Storage Humidity: 5%~95% non-condensing